

1 RON E. SHULMAN, State Bar No. 178263  
rshulman@wsgr.com  
2 TERRY KEARNEY, State Bar No. 160054  
tkearney@wsgr.com  
3 RICHARD G. FRENKEL, State Bar No. 204133  
rfrenkel@wsgr.com  
4 WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation  
5 650 Page Mill Road  
Palo Alto, CA 94304-1050  
6 Telephone: (650) 493-9300  
Facsimile: (650) 565-5100  
7  
8 Attorneys for Plaintiff SYNOPSYS, INC.  
and for Defendants AEROFLEX INCORPORATED,  
9 AMI SEMICONDUCTOR, INC., MATROX  
ELECTRONIC SYSTEMS, LTD., MATROX  
10 GRAPHICS, INC., MATROX INTERNATIONAL  
CORP., MATROX TECH, INC., and  
11 AEROFLEX COLORADO SPRINGS, INC.

12 UNITED STATES DISTRICT COURT  
13 NORTHERN DISTRICT OF CALIFORNIA  
14 SAN JOSE DIVISION  
15

16 IN RE RICOH COMPANY LTD. PATENT ) CASE NO.: C 03-02289 JW  
LITIGATION )  
17 ) **SYNOPSYS'S AND CUSTOMER**  
18 ) **DEFENDANTS' REPLY BRIEF IN**  
19 ) **SUPPORT OF THEIR RENEWED**  
20 ) **MOTION FOR SUMMARY JUDGMENT**  
21 ) **OF NONINFRINGEMENT**  
22 )  
23 ) Date: March 8, 2010  
24 ) Time: 9:00 a.m.  
25 ) Courtroom 8, 4<sup>th</sup> Floor  
26 ) Honorable James Ware

27  
28  
**PUBLIC VERSION**

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**TABLE OF ABBREVIATIONS**

Brf.	Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010 (Confidential version at D.I. 662, redacted public version at D.I. 656)
Ex. ____	The corresponding exhibit attached to the Declaration of Richard G. Frenkel, submitted in support of Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010 (D.I. 658, except for confidential exhibits 7-15, which are part of D.I. 664)
Adams Decl./Ex.	The Declaration of (or corresponding exhibit attached to the Declaration of) Jay Adams In Support Of Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed January 8, 2010 (D.I. 663, under seal)
Opp.	Ricoh's Opposition to Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed February 5, 2010 (Public version at D.I. 669, confidential version submitted by Ricoh and pending)
Opp. Ex. ____	The corresponding exhibit attached to the Declaration of Kenneth W. Brothers, submitted in support of Ricoh's Opposition to Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed February 5, 2010 (Public version at D.I. 669-2, confidential version submitted by Ricoh and pending)
Soderman Decl.	The Declaration of Donald Soderman In Support Of Ricoh's Opposition to Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed February 5, 2010 (Public version at D.I. 669-3, confidential version submitted by Ricoh and pending)
Papaefthymiou Decl.	The Declaration of Marios Papaefthymiou In Support Of Ricoh's Opposition to Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed February 5, 2010 (Public version at D.I. 669-5, confidential version submitted by Ricoh and pending)
Reply Ex. ____	The corresponding exhibit attached to the Declaration of Richard G. Frenkel, submitted in support of Synopsys Inc.'s and Customer Defendants' Renewed Motion for Summary Judgment of Noninfringement, filed concurrently herewith.

Note: All emphasis throughout the brief is added, unless otherwise indicated.

1 **I. INTRODUCTION**

2 Synopsys filed the present motion with permission because its customers' inputs are all  
 3 dependent on particular arrangements of "hardware cells" – hardware cells called "registers" that  
 4 Ricoh distinguished during prosecution as not being its "architecture independent" invention.  
 5 Ricoh belittles the Court for agreeing to consider this defense twice and chides Synopsys for  
 6 filing an earlier version that was denied, without prejudice, (along with 10 other summary  
 7 judgment motions) when the case was stayed pending *ex parte* reexamination of Ricoh's '432  
 8 patent.

9 The true source of Ricoh's aggravation is, however, not the Court's patience and  
 10 Synopsys's resolve. Rather it is the fact that Ricoh has run out of increasingly untenable excuses  
 11 that it insists a jury should be empanelled to hear. In 2006, Ricoh's excuse was that there was  
 12 "functional RTL" and "structural RTL" – and Synopsys's products accepted "functional RTL"  
 13 inputs. In 2008, Ricoh invented "Darringer RTL" and "non-Darringer RTL" – and argued that it  
 14 disclaimed only "Darringer-RTL."

15 Now that the Court has removed "RTL" and "Darringer" from the construction of  
 16 "architecture independent" (finding them *a fortiori* "not [] architecture independent"), Ricoh  
 17 argues that by referring to "hardware cells" in its revised construction, the Court has ruled that  
 18 arrangements of registers are architecture independent. And if Court did not mean that, then  
 19 surely the Court differentiated between "functional registers" and "hardware registers" and ruled  
 20 that arrangements of "functional registers" are architecture independent. (Coincidentally, Ricoh  
 21 argues (for the first time in eight years) that the registers found in the Customer Defendants'  
 22 inputs are "functional registers.") And if all that fails, Ricoh ignores the registers and demands a  
 23 jury trial because its experts have isolated snippets of the accused input descriptions (to the  
 24 exclusion of the rest of the input files) that Ricoh argues are "architecture independent."

25 The time has come to put an end to Ricoh's attempts to drag the Court, a jury, Synopsys  
 26 and Synopsys's customers through the looking glass.

27 With respect to Synopsys's alternative ground for non-infringement that no single entity  
 28 practices all steps of claim 13 of the '432 patent, Ricoh does not even purport to raise an issue of

fact. Ricoh nowhere disputes that the claim says “storing *in an expert system knowledge base* a set of rules.” And Ricoh nowhere disputes that Synopsys, not the Customer Defendants, stores the accused set of rules in the expert knowledge base when it writes the Design Compiler software before shipping that software to the Customer Defendants. Instead, Ricoh argues that “storing *in an expert system knowledge base*” should be (mis)construed to mean “loading the software that contains the knowledge base into computer memory,” which is an act performed by the Customer Defendants. Thus at most, Ricoh’s argument raises a pure legal issue of claim construction, which is no impediment to summary judgment. And for the reasons explained in detail below, Ricoh’s proposed construction is untenable. For this reason as well, summary judgment should be granted.

## II. ARGUMENT

### A. Synopsys’s Motion Should Be Granted Because Registers Are Hardware Cells And The Accused Files Depend on Arrangements Of Registers

Ricoh advances basically three reasons for rejecting Synopsys’s motion as it relates to the step of “describing ... architecture independent actions and conditions.” First, Ricoh argues that the term “hardware cells” in the Court’s Revised *Markman* Order does not include registers. Second, Ricoh argues that if “hardware cells” includes “registers,” it only includes “hardware” registers. And third, even if there is no distinction between “hardware” and “functional” registers, isolated snippets of the accused input files are “architecture independent.”

None of these arguments is sound.

#### 1. Ricoh’s Distortion Of The Court’s Revised *Markman* Order Should Be Rejected

Ricoh argues that “hardware cells,” a term used by the Court in construing “architecture independent,” do not include registers and therefore inputs that depend on specific arrangements of registers are “architecture independent.” To arrive at its conclusion, Ricoh (a) attempts to sweep under the rug critical portions of the Court’s Revised *Markman* Order as “*dicta*,” (b) misinterprets the ‘432 patent and (c) ignores the patent’s prosecution history. For the reasons explained below, Ricoh’s position is entirely unsound and is no barrier to summary judgment.

**a. The Revised *Markman* Order Is Not “*Dicta*”**

On page 7 of the Revised *Markman* Order, the Court stated that “architecture independent” means “not dependent on any particular arrangement of hardware cells.” D.I. 644 at 7. On page 8 of that Order, the Court further stated that “any system for designing an ASIC that requires the user to input information based on the user having an understanding of the flow of data through registers, logic gates or any other hardware *a fortiori* would not be ‘architecture independent.’” *Id.* at 8. Ricoh criticizes Synopsys for relying on the second passage to explain that within the meaning of the Court’s claim construction, arrangements of registers are not “architecture independent.” According to Ricoh, the Court’s statement on page 8 is irrelevant *dicta*. Ricoh is wrong and its criticism is baseless.

In the briefing leading up to the Revised *Markman* Order, the primary focus of the parties was whether the construction of “architecture independent actions and conditions” required a reference to “register-transfer level” (RTL) descriptions or to the prior art Darringer reference. *See* D.I. 644 at 8. At page 8 of the Order, the Court explained why it was unnecessary to include such a reference in the construction, stating that “any system for designing an ASIC that requires the user to input information based on the user having an understanding of the flow of data through registers, logic gates or any other hardware *a fortiori* would not be ‘architecture independent.’” This passage clearly explains that arrangements of “registers, logic gates *or any other hardware a fortiori* would not be ‘architecture independent’” as the Court construed that term. If the Court had ruled that registers are not a form of “hardware cells,” as Ricoh contends, then the Court never would have ruled that “registers, logic gates *or any other hardware a fortiori* would not be ‘architecture independent.’”

**b. The Patent Specification Confirms That Registers Are a Form of Hardware Cells**

Separate and apart from the Court’s Order, there cannot be any genuine dispute that registers are a form of hardware cells because the specification of the ‘432 patent explicitly says that they are. In describing the preferred embodiment, the patent says that Figure 1(b) illustrates “architecture specific circuit hardware components . . . such as adders, comparators, [and]

1 registers.” Brf. at 8-9, citing, *inter alia*, Ex. 1 at 3:65-67; *see also* Ricoh’s 9/1/06 Opposition to  
 2 Synopsys’s Motion for Summary Judgment of Noninfringement re RTL (D.I. 455) at 1 (“The  
 3 ‘432 Patent teaches that an example of *structural* level representations includes architecture  
 4 specific *hardware components* such as adders, comparators, *registers*, system controllers, etc.”).  
 5 Despite these clear statements, Ricoh now stubbornly maintains that registers cannot be  
 6 hardware cells because were it otherwise, a supposedly preferred embodiment illustrated in  
 7 Figure 5 would be excluded from the scope of the claims. Opp. at 14. Ricoh is wrong.

8 According to column 3, lines 20-22 of the ‘432 patent, “FIG. 5 is an example flowchart  
 9 defining a sequence of functional operations to be performed by an integrated circuit.” The  
 10 figure, on its face, does not mention any registers. At column 6, lines 1-14, the patent says that  
 11 Figure 5 depicts three actions and one condition. Each of the three actions is said to involve  
 12 moving a value of a variable to a register. However, the Figure 5 description in columns 3 and 6  
 13 (which are the only places where it is described) does not say that the “actions and conditions are  
 14 “architecture independent.” This is of critical significance for the following reasons.

15 The term “architecture independent” did not appear anywhere in the originally filed  
 16 application for the ‘432 patent. Thus as originally filed, the patent covered both “architecture  
 17 dependent” as well as “architecture independent” actions and conditions. The term was added to  
 18 the application in April 1989 in response to the Patent Office’s citation of a prior art reference  
 19 written with a “register transfer level flowchart control language.” Ex. 2 at 1-9. But notably,  
 20 while Ricoh amended all of the claims, the Abstract, and certain locations in the specification to  
 21 recite “architecture independent,”<sup>1</sup> Ricoh did *not* amend the description of Figure 5 to specify  
 22 that Figure 5 showed “architecture independent” actions and conditions. Thus, there is no  
 23 support for Ricoh’s postulation that Figure 5 is an “architecture independent” preferred  
 24 embodiment of the alleged invention; it can hardly be an “architecture independent preferred  
 25 embodiment” when it does not even use the term “architecture independent.”

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26  
 27 <sup>1</sup> The few, selected locations in the specification that were amended to recite “architecture  
 28 independent” appear at column 2, lines 10, 21 and 30, column 3, line 51, column 4, line 16, and  
 the Abstract.



Equally important, Ricoh conveniently fails to cite the description of Figure 6, also in column 6, which “illustrates the results of mapping the flowchart of Figure 5 *onto hardware cells*.” And what “hardware cells” are included in Figure 6? The answer is registers, as well as the adder, comparator and system controller, all of which are identified as hardware cells in column 3, lines 65-67, discussed, *supra* pp. 3-4. Thus, the Court’s construction of “hardware cells” as including “registers, logic gates or any other hardware” is entirely supported by the patent specification, and the Customer Defendants’ use and description of such hardware is not “architecture independent.” *See also infra* Section II.A.3 (explaining how Ricoh ignored that the accused design inputs are like the Figure 6 registers, and not like Figure 5).

**c. Excluding Registers From the Definition of Hardware Cells is Inconsistent With the Prosecution History and Cited Prior Art**

Ricoh’s attempt to divorce hardware cells from registers must fail because it twists the public record – arguing one thing to secure the issuance of the patent claims and arguing exactly the opposite to enforce those claims. This is illustrated in Appendix A to this brief, which compares the registers of Figure 6 to those of the “APLAS” reference that Ricoh distinguished during prosecution. Appendix A shows that the APLAS design includes three blocks labeled SCORE, CARDBUF and FF. Those blocks are described in the design input code displayed in the APLAS reference as “registers,” as can be seen on page 392 of Reply Exhibit 16.

During prosecution, Ricoh specifically distinguished the registers in APLAS as requiring “specialized knowledge of a highly skilled VLSI design engineer relating to computer architecture and hardware since input to the [Polaris and APLAS] systems is in the form of register transfer level languages.” Ex. 2 at 13.<sup>2</sup> Those registers are the same elements as the registers shown in Figure 6, and described in column 6 of the ‘432 patent as being “hardware cells.” To suggest that registers are not “hardware cells” is to not only ignore the patent’s

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<sup>2</sup> For further background on the relevant prosecution history, *see* Synopsys’s November 2008 Motion for Summary Judgment of Noninfringement (D.I. 571) at 4-5 and Synopsys’s June 2009 Brief on Further Claim Construction (D.I. 627) at 6-9.

specification, but to also completely disregard the ‘432 patent prosecution. Ricoh’s invitation to do so should be declined.

## 2. Ricoh’s Expert’s Do Not Create A Material Issue Of Fact By Claiming That A “Register” Is Not A “Register”

Next, Ricoh claims that even if some registers can be considered “hardware cells,” there supposedly is a factual dispute about whether the registers specified in the accused design input files are “hardware cells.” Ricoh is wrong. Merely alleging the existence of a factual dispute is no bar to summary judgment. The proper inquiry is whether there exists a *genuine* dispute about a material fact. *See Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986).

According to Ricoh’s expert, Dr. Soderman, a register specified in an accused design input file is only a “hardware cell” if the design input file specifies “exactly how hardware implementations of the circuit and registers operate to actually perform the register functionality.” Soderman Decl. ¶ 11; *see also id.* ¶¶ 8, 12-18 & 20 (all requiring hardware cells to relate to an “implementation” of registers, and not registers themselves). This flies in the face of what the ‘432 patent states about Figure 6: that a “Register,” without all the further structural details that Dr. Soderman thinks are necessary, is a “hardware cell.”

Dr. Soderman also spins his argument as Ricoh’s dichotomy du jour: “*functional*” registers *versus* “*hardware*” registers that “specify that the ‘register’ function will be implemented using circuitry such as a ‘D’-flip-flop,” asserting that only “hardware” registers can be considered to be “hardware cells” while the registers specified in the accused input files are not “hardware.” Opp. at 17-18 & n.14;<sup>3</sup> *see also* Soderman Decl. ¶¶ 15-22. But a rose is still a rose by any other name.

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<sup>3</sup> If the “functional registers versus hardware (structural) registers” dichotomy sounds familiar to the Court, it is because Ricoh used the “functional RTL versus structural RTL” distinction or some variation thereof in its 2004 claim construction briefs (D.I. 168 at 20-21 and D.I. 190 at 5-8 & n.7), its 2006 expert reports (Exs. 12-14 at 13-14), its 2006 opposition to Synopsys’s RTL summary judgment motion (D.I. 455 at 11-12), its 2008 opposition to Synopsys’s summary judgment motion on that same issue filed after the stay was lifted (D.I. 591 at 20-21), and its 2009 claim construction briefs. *E.g.*, D.I. 625 at 13-16. Ricoh’s meritless “distinction between ‘structural’ and ‘functional’ RTL-type input systems” was rejected by Judge Jenkins in his April 2005 Claim Construction Order, Ex. 5 at 12:9-12.

1 The only purported support for Ricoh's functional v. hardware argument are some  
 2 deposition excerpts from some defense witnesses and Dr. Soderman's freshly minted declaration.  
 3 But even a cursory review of this evidence reveals that it does not provide any foundation for  
 4 Ricoh's argument. The cited witness testimony merely says that the Synopsys Design Compiler  
 5 *is capable of* allowing input in a lower form (e.g., "circuitry such as a 'D'-flip-flop," as  
 6 Soderman suggests) than at the register transfer level. This is nothing new. Synopsys readily  
 7 admitted this fact in its opening brief. *See* Adams Decl. ¶ 2, first sentence; *see also* D.I. 571 at 7.  
 8 It also proves nothing. Just because Design Compiler is capable of accepting as an input a  
 9 lower-level description of a specific type of flip-flop that all parties agree is architecture  
 10 dependent says nothing whatsoever about whether the arrangements of registers specified in the  
 11 accused design input files are (or are not) architecture dependent.

12 Even if there were a basis for Dr. Soderman's concoction of "functional" registers (of  
 13 Figure 5 of the '432 patent) and "hardware" registers (of Figure 6 of the '432 patent), Dr.  
 14 Soderman and Ricoh just ignore all the evidence that the registers in the Customer Defendant  
 15 design input files are more than an abstract idea of a register. For example, in the accused input  
 16 files, [REDACTED]. *See, e.g.*, Adams Ex. 2 at 211-  
 17 215 (specifying [REDACTED]). Register "bits" are described in the  
 18 '432 patent *not* as being part of the input to Ricoh's invention, but rather as an intermediate step  
 19 showing actual hardware, like the registers in Figures 6 and 11. Ex. 1 at 13:32-35 & 14:9.  
 20 Moreover, the accused input files depend on particular *arrangements* of registers. (Adams Decl.  
 21 ¶¶ 14, 16-21 and Ex. 9.)

22 Further, in addition to all of the arrangements of "hardware" registers identified by Dr.  
 23 Adams in the Customer Defendant design input files, those input files are replete with  
 24 arrangements of additional hardware, such as [REDACTED] (*see id.* Ex. 2 at lines  
 25 296-307) which the '432 patent expressly describes as "architecture specific circuit hardware  
 26 components" (*see, e.g.*, Ex. 1 at 3:65-67) and which Ricoh distinguished during prosecution as  
 27 not "architecture independent." Notably, Figure 6 of the '432 patent and Figure 4 of the APLAS  
 28 reference (each showing a particular arrangement of registers as hardware cells distinguished by

Ricoh as not “architecture independent”) are identical in form to the Customer Defendants’ design input files, as depicted in Adams Ex. 9. *See* Appendix A (comparing the three exhibits). Each of these references has inputs, outputs, an arrangement of registers, and control logic, and in each, the registers are defined with multiple bits. Ricoh and its experts conveniently ignored these additional arrangements of hardware, without any basis. *See, e.g.,* Papaefthymiou Decl. ¶ 5; Soderman Decl. ¶ 15.

Moreover, Dr. Soderman has done an about-face from the prior testimony that he and Dr. Papaefthymiou gave in this case on this very issue. In their depositions, after being administered an oath and swearing to tell the truth, both experts readily admitted that the Customer Defendant design inputs had registers that Soderman now defines as “hardware.” *See, e.g.,* Ex. 15 at 59:2-6; Brf. at 4; *see also* Ex. 11 at 80:8-13 (“Q: [REDACTED]

[REDACTED] DR. SODERMAN: [REDACTED]). While Dr. Soderman’s new declaration essentially recants this testimony, it is black-letter law that a party cannot create a genuine issue of material fact by contradicting prior sworn testimony through a later declaration. *See In re Cygnus Telecommc’ns. Tech., LLC Patent Litig.*, 481 F. Supp. 2d 1029, 1050-51 (N.D. Cal. 2007) (citing *Sinskey v. Pharmacia Ophthalmics, Inc.*, 982 F.2d 494, 498 (Fed. Cir. 1992)), *aff’d*, 536 F.3d 1343 (Fed. Cir. 2008).

In a last-ditch effort to create a factual dispute, Ricoh sprinkles its brief with quotations from Synopsys and Customer Defendant witnesses. Opp. at 17-18 & n.14 (citing depositions of Webster, Chiappini and Boisvert). But these out of context quotes prove nothing.

For example, Ricoh contends that Mr. Boisvert (a Customer Defendant witness) admitted that [REDACTED]” Opp. at 18, 20. But Ricoh’s characterizations are purposefully deceptive. In the very next question after the one quoted by Ricoh, Ricoh tried and failed to get Mr. Boisvert to admit that his company did not [REDACTED]

O: [REDACTED]

A: [REDACTED]

Brothers Ex. G at 34:13-20; *see also id.* at 135:18-23 & 136:9-15 (contrary to Ricoh's representation, Mr. Boisvert did not testify that he [REDACTED], but rather that [REDACTED]. Ricoh's citation of other Customer Defendant witnesses is equally unavailing, for those witnesses were not being asked about specific registers in specific design input files, but rather broad and irrelevant questions about [REDACTED] e.g., Reply Ex. 18 at 54:8-14 (Mr. Webster of Aeroflex) [REDACTED] E.g., Reply Ex. 19 at 289:11-14 (Mr. Chiappini of Matrox).

In sum, the evidence cited by Ricoh provides no support for its assertion that there exists a genuine issue of material fact about whether the registers specified in the accused design input files are "structural" or "functional." Registers are hardware cells, as the Court has ruled, and an arrangement of hardware cells is not architecture independent, as the Court also has ruled.

### 3. Ricoh's "Evidence" Consists Only Of Conclusory Assertions Based On Snippets From The Accused Design Files Taken Out Of Context

Last, and certainly least, is Ricoh's claim that it "has considerable admissible evidence supporting its infringement claims." Opp. at 12. Ricoh's bald assertions are no basis for denying this motion. The *entirety* of Ricoh's "considerable evidence" consists of citations to its experts' declarations on page 12 of its brief and an unsupported statement on page 13. It does not withstand scrutiny.

Ricoh first cites the Papaefthymiou Declaration, where Ricoh's expert picks isolated lines from the Customer Defendants' design input files and opines that each of those isolated lines is "architecture independent" because each [REDACTED] *See, e.g.,*

1 Papaefthymiou Decl. ¶ 7. This “analysis” of slivers from the Customer Defendants’ design input  
2 files is wholly inappropriate, and flies in the face of the actual claim language.

3 The fourth step of claim 13 does not just recite describing an architecture independent  
4 action and condition in the abstract, but rather describing “a series” of them “for a proposed  
5 application specific integrated circuit [*i.e.*, ASIC].” Thus, Dr. Adams, a Synopsys fact witness  
6 who looked at the code,<sup>4</sup> looked at the *entirety* of the accused Customer Defendant design input  
7 files because those entire files contain the “series” of actions and conditions “for a proposed  
8 ASIC,” all of which must be “architecture independent.” Dr. Papaefthymiou, on the other hand,  
9 selectively ignored the ubiquitous lines in those files describing arrangements of registers and  
10 instead, self-servingly focused only on slivers of those files that, alone, do not constitute the  
11 “series” of actions and conditions “for a proposed ASIC.” This is insufficient evidence to avoid  
12 summary judgment. *See, e.g., Regents of the Univ. of Cal. v. Micro Therapeutics, Inc.*, 507 F.  
13 Supp. 2d 1074, 1080 (N.D. Cal. 2007) (refusing to consider expert declaration opposing  
14 summary judgment when at odds with the properly-construed claim).

15 Ricoh’s contention that if there are *any* architecture independent lines in the accused  
16 design input files, then the entirety of those files is architecture independent (Opp. at 13) turns  
17 the claim on its head. As mentioned above, the phrase “architecture independent” did not appear  
18 in Ricoh’s original patent application. It was only in response to a prior art rejection that Ricoh  
19 amended all of the claims and selected portions of the specification to insert the phrase  
20 “architecture independent.” Ex. 2 at 1-8. As a consequence of this amendment, Ricoh  
21 surrendered claim scope that was *not* architecture independent – *all* of the “series” of actions and  
22 conditions required by the claimed describing step must be “architecture independent” and none  
23 can be “architecture dependent.” This conclusion is buttressed by the plain meaning of the word  
24 “independent” which, of course, is “free from” or “not having any.” Thus “architecture  
25

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26 <sup>4</sup> Ricoh attacks the admissibility of Synopsys’s evidence because it claims that Dr. Adams  
27 did not attest to personal knowledge of writing any accused input code. Opp. at 19. But Adams,  
28 a developer and user of Design Compiler, attested to his knowledge, experience, and familiarity  
with customer inputs. Adams Decl. ¶ 1.

1 independent” means “not having *any* architecture,” which also explains why Ricoh told the  
 2 Patent Office that the users of its architecture independent design inputs “need not possess *any*  
 3 expertise common among highly skilled VLSI design engineers since input to the present  
 4 invention is in the form of an architecture *independent* functional specification.” Ex. 2 at 9  
 5 (distinguishing prior art written in the “register transfer level flowchart control language”).<sup>5</sup>

6 So Ricoh’s contention, that if there are *any* architecture independent lines in the accused  
 7 design input files, then the entirety of those files is architecture independent, is just plain wrong.  
 8 “Architecture independent” is a negative limitation which precludes the presence of any  
 9 architecture in the claimed “actions and conditions.” And just like the presence of a paint color  
 10 in an architect’s building plans does not make those plans “architecture independent,” the  
 11 presence of multiplication or addition in a fragment of the accused design input files does not  
 12 make those files “architecture independent.” The express purpose of the ‘432 patent is to  
 13 eliminate the need for “highly skilled VLSI engineers to create the necessary structural level  
 14 hardware description.” Ex. 1 at 1:60-62. Ricoh fails to explain how that purpose can possibly be  
 15 accomplished if that “specialized expert knowledge” (*id.* at 2:15-20) is required for all but a  
 16 small fragment of the input file.

17 Not confident that one of its experts, Dr. Papaefthymiou, will carry the day, Ricoh also  
 18 summons its other expert Dr. Soderman, and cites to paragraphs 17-19 & 22 of his declaration as  
 19 part of Ricoh’s “considerable evidence.” But just like the Papaefthymiou “evidence”, the  
 20 Soderman “evidence” consists of improper analysis of “isolated snippets” (¶ 17), and conclusory,  
 21 unsupported opinions (¶¶ 19, 22) that are insufficient to defeat summary judgment. *See*  
 22 *Intellectual Sci. & Tech., Inc. v. Sony Elecs., Inc.*, 589 F.3d 1179, 1184 (Fed. Cir. 2009). Like  
 23 Dr. Papaefthymiou, Dr. Soderman also ignored the particular arrangements of registers listed in  
 24

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25 <sup>5</sup> Further, Ricoh’s suggestion that the presence of addition or multiplication creates  
 26 architecture independent design input files is belied by the references Ricoh distinguished during  
 27 patent prosecution, including the Darringer patent. *See* Reply Ex. 17 at Fig. 4 & 5:27-29  
 28 (picturing an exemplary “register-transfer level description” as including simple addition). Not  
 only is Ricoh’s analysis out of context and contrary to the plain meaning of the claims, but it is  
 also at odds with the references Ricoh specifically distinguished during patent prosecution.



1 Adams Exs. 2-8 and pictured in Adams Ex. 9, but in any event opines that even if the input files  
 2 used a particular arrangement of “registers,” those registers are not real registers. Soderman  
 3 Decl. ¶ 18. But as described above, Dr. Adams showed exactly where, in each of the design  
 4 input files, there was a particular arrangement of registers, and Dr. Soderman’s “a register is not  
 5 a register” argument defies logic. Adams Decl. ¶¶ 14 & 16-21.

6 Incredibly, Ricoh purports to fault *Synopsys* for analyzing only the input files cited in  
 7 the Adams declaration, while proclaiming that its experts “analyzed every one of the accused  
 8 designs.” Opp. at 13. Notably, however, Ricoh did not cite to any evidence to support its claim  
 9 about what its experts supposedly did. The reason is plain. It has no such evidence. Dr.  
 10 Papaefthymiou’s expert report on infringement, submitted earlier in this case, was expressly  
 11 limited to the very same files cited in the Adams declaration. Moreover, that expert report only  
 12 analyzed slivers of the input files, just as Papaefthymiou does again in his declaration submitted  
 13 with Ricoh’s opposition to this motion. See Ex. 12 at 10-12, Ex. 13 at 10-11, and Ex. 14 at 10-  
 14 12. Nowhere does Ricoh analyze the “series” of actions and conditions “for a proposed ASIC”  
 15 contained in the entirety of each design input file, as required by the claim. Ricoh’s failure to do  
 16 so is compelling evidence that this motion should be granted.

17 **B. Summary Judgment Based On Divided Infringement Should Also Be**  
 18 **Granted**

19 With respect to Synopsys’s alternative ground for non-infringement that no single entity  
 20 practices all steps of claim 13 of the ‘432 patent, Ricoh does not even purport to raise an issue of  
 21 fact. Ricoh nowhere disputes that the claim says “storing *in an expert system knowledge base* a  
 22 set of rules.” And, Ricoh nowhere disputes that Synopsys, not the Customer Defendants, stores  
 23 the accused set of rules in the expert knowledge base when it writes the Design Compiler  
 24 software before shipping that software to the Customer Defendants.

25 Instead, Ricoh urges the Court to construe the claimed step of “storing *in an expert*  
 26 *system knowledge base*” to mean “loading the software that contains the knowledge base into  
 27 computer memory.” Based on this erroneous proposed construction, Ricoh argues that the  
 28 Customer Defendants perform this act. Thus at most, Ricoh’s opposition to this prong of the



1 instant motion raises only a pure legal issue of claim construction, which is no impediment to  
2 summary judgment.

### 3 **1. Ricoh Does Not Raise Any Factual Disputes**

4 The so-called “factual dispute” section at pages 24-25 of its brief do not identify any  
5 factual disputes at all. The first paragraph in that section refers back to pages 9-11, but pages 9-  
6 11 deal exclusively with the “registers” prong of this motion and have nothing whatsoever to do  
7 with storing a set of rules in an expert system knowledge base. The first paragraph also refers to  
8 “Ricoh’s experts,” but the only section in either expert’s declaration discussing “storing” is Dr.  
9 Soderman’s admission that expert rules are first stored in a knowledge base “by VLSI experts”  
10 prior to the knowledge base containing those rules being stored “in computer memory.”  
11 Soderman Decl. ¶ 9. Thus Soderman’s declaration supports Synopsys’s position. Similarly, the  
12 second and third paragraphs of the “factual dispute” section do not cite any evidence or facts.

13 Thus there are no factual disputes that would prevent the Court from granting this prong  
14 of the instant motion. The only issue that need be resolved by the Court is the proper legal  
15 construction of the phrase “storing *in an expert system knowledge base* a set of rules” to which  
16 we now turn.<sup>6</sup>

### 17 **2. Synopsys’s Interpretation of the Claim Language Is Correct Whereas** 18 **Ricoh’s Is Wrong**

19 A simple grammatical analysis of the claimed step “storing in an expert system  
20 knowledge base a set of rules” reveals that Synopsys’s interpretation is correct. The word  
21 “storing” is a verb. The object of that verb is “a set of rules.” Thus an entity that performs these  
22 two elements of the claimed step is “storing a set of rules.” The phrase “in an expert system  
23 knowledge base” is a prepositional phrase modifying the verb “storing.” The prepositional  
24 phrase identifies the location where the “storing” occurs. Thus an entity that performs the  
25 entirety of the claimed step is “storing a set of rules in an expert system knowledge base.”

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26  
27 <sup>6</sup> Ricoh further does not allege that the Customer Defendants “direct or control” Synopsys’s  
28 creation of the expert rules. See Brf. at 11-12. Therefore, this dispute purely focuses on who  
stores those rules in “an expert system knowledge base.”

1 Ricoh nowhere disputes that Synopsys, rather than the Customer Defendants, stores the  
2 set of rules in the expert system knowledge base when it writes the Design Compiler software  
3 before that software is shipped to the Customer Defendants.

4 Instead, Ricoh argues that the plain meaning of the claimed step should be jettisoned in  
5 favor of its tortured construction. According to Ricoh, the claimed step should be interpreted to  
6 mean “loading the software that contains the knowledge base into computer memory.” Opp. at  
7 21, lines 7-16. But the claimed step does not mention “loading.” Nor does it mention  
8 “software.” And, it certainly does not identify “computer memory” as the location where the set  
9 of rules is stored. In short, Ricoh’s proposed construction bears no resemblance to the words that  
10 appear in the claim. It is a litigation-induced artifice created by counsel in an attempt to avoid  
11 the fatal fact that the Customer Defendants simply do not perform this step of the claim.

12 That Ricoh’s claim construction position is fallacious is clearly illustrated by the  
13 following analogy. Assume there was a patent that claimed the following method step: “storing  
14 a set of books in a box.” If person A places the set of books in the box, then person A practices  
15 that step. If person A then gives the book-containing box to person B who places the box in the  
16 garage, person B has not performed the claimed step of “storing a set of books in a box.” Rather  
17 person B has performed the *unclaimed* step of storing a box in the garage, just like the Customer  
18 Defendants perform the *unclaimed* step of “loading the software that contains the knowledge  
19 base into computer memory.”

20 Finally, Ricoh contends that Synopsys’s proposed construction must be wrong because  
21 supposedly, it would “exclude Ricoh’s preferred embodiment.” Once again, Ricoh is wrong.  
22 The patent nowhere says that the step of “storing in an expert system knowledge base a set of  
23 rules” is preferably performed by a user “loading the software that contains that knowledge base  
24 into computer memory.” In fact, as explained in Synopsys’s opening brief, the ‘432 patent says  
25 the opposite. Brf. at 12-13. A VLSI expert creates and stores the expert rules in the knowledge  
26 base. In contrast, the patent and file history repeatedly say that a user of the ‘432 system does  
27 not, and need not, possess any of the sophisticated knowledge of a VLSI expert. *See, e.g.*, Ex. 1  
28 at 2:15-20; Ex. 2 at 8-9.

1 **III. CONCLUSION**

2 For all the foregoing reasons, Synopsys's and Customer Defendants' renewed motion for  
3 summary judgment of non-infringement should, with respect, be granted.

4  
5 Respectfully submitted,

6 Dated: February 19, 2010

WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation

7  
8 By: /s/ Ron E. Shulman  
Ron E. Shulman

9  
10 Attorneys for Plaintiff SYNOPSYS, INC. and  
11 for the Customer Defendants  
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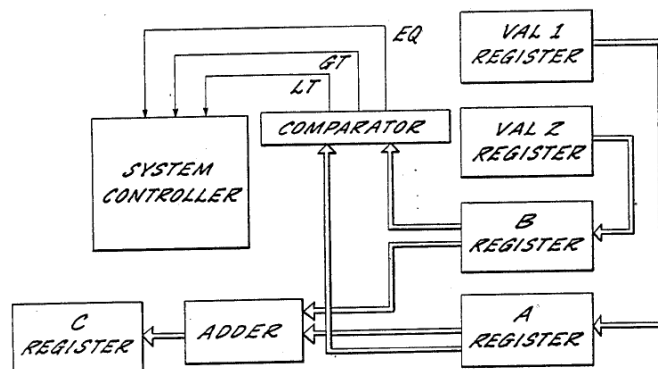
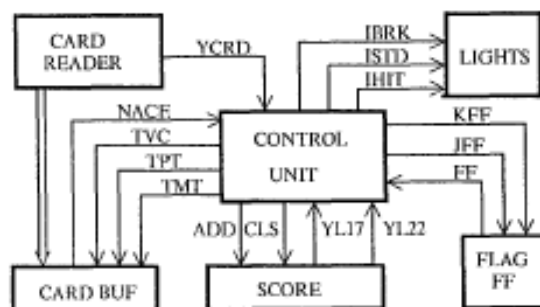
**APPENDIX A**Figure 6 of the '432 Patent (Ex. A):FIG. 6.Figure 4 of the APLAS Reference (Reply Ex. 16):5 QUALIFIERS  
10 CONTROL SIGNALS

Figure 4. Blackjack Machine

Diagram of Aeroflex Design Input File (Adams Ex. 9)**REDACTED**